



Oregon

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February 15, 2006

Mr. John O'Donovan, PE
City of Portland Bureau of Environmental Services
1120 SW Fifth Ave., Room 1000
Portland, OR 97204-1912

RE: Conditional No Further Action Determination
Linnton Oil Fire Training Grounds
ECSI #1189

Dear Mr. O'Donovan:

The Oregon Department of Environmental Quality (DEQ) reviewed the above-referenced site, including the April 15, 2005 *Five-year Review Report* concerning groundwater quality. The purpose of this letter is to document DEQ's no further action (NFA) determination at the subject property. The project was conducted under DEQ's Voluntary Cleanup Program oversight in accordance with the Intergovernmental Agreement (IGA) with the City of Portland executed on March 17, 1993 and superseded by an IGA executed on January 3, 2005.

DEQ determined that no further action is required to address environmental contamination at the subject property. This determination is based on the regulations and facts as we now understand them, including but not limited to the following:

1. The former Linnton Oil Fire Training Grounds (LOFTG) Site is located at the intersection of NW Marina Way and St. Helens Road approximately ½ mile north of the Linnton District of Portland. The site is about 500 feet from the Willamette River, and is located at approximately River Mile 3.5 within the Portland Harbor Superfund Site.
2. The LOFTG property is owned by the Bonneville Power Administration (BPA) and serves as a right-of-way for high-tension power lines. Beginning in 1951, the City of Portland leased the property from BPA for fire training purposes. Fire training operations occurred through 1988. During the oil fire training exercises, petroleum products were pumped to various props, ignited, and extinguished. The petroleum products were obtained from area businesses. Unburned products infiltrated into the ground or ran into a drainage ditch along the southern property boundary. The Remedial Investigation detected petroleum and chlorinated solvents in soil to 16 feet below ground surface. In addition, groundwater was also found to be contaminated with petroleum related compounds, pentachlorophenol (PCP), and chlorinated solvents.



3. A Remedial Investigation and Feasibility Study (RI/FS) was completed for the site in November 1995. In May 1996, the Director of DEQ signed a Record of Decision (ROD). Key elements of the identified remedy included:
 - Treatment of petroleum contaminated soil through excavation and thermal desorption;
 - Pretreatment of chlorinated solvent contaminated soil through biodegradation;
 - On-site disposal of treated soils;
 - Groundwater monitoring to confirm the effectiveness of the soil remedy; and
 - Institutional controls to prevent exposure to residual contamination.
4. In August 1996, an IGA was signed between DEQ and the City of Portland for implementation of the remedy. The Remedial Action was implemented in 1998 whereby the majority of contaminated soil above a depth of 8 feet was removed, treated and replaced at the site. Semi-annual groundwater monitoring of 12 wells was conducted from November 1999 through October 2004 to assess the effectiveness of the remedy and attenuation of groundwater contaminant concentrations. An Easement and Equitable Servitude restricting subsurface excavation and groundwater use was recorded with Multnomah County on August 11, 2003 to ensure that the remedy remains protective.
5. Depth to groundwater ranges from about 2 to 21 feet below ground surface and groundwater flow is northeast towards the Willamette River. Based on groundwater monitoring results conducted at the subject site and trend analyses presented in the *Five-Year Review Report*, DEQ has determined that groundwater contaminant plumes are generally stable or decreasing in size and concentration. The leading edge of the plume is over 600 feet from the Willamette River and does not appear to be advancing towards the river. The deed restriction prevents human exposure to site groundwater. Therefore, the remedy described in the ROD has been successfully implemented.
6. Groundwater constituents that exceeded human health-based screening levels in the October 2004 monitoring event include: PCP, benzene, vinyl chloride, 1,1-dichloroethene, and arsenic. Screening for ecological receptors is not appropriate since the plume is stable and a significant distance from the Willamette River. Lack of migration and continued natural attenuation of contaminants will be confirmed by annual groundwater monitoring with five-year reviews.
7. Discovery of a surface water drainage culvert from the subject site on to the adjacent undeveloped BPA property prompted an investigation in 2003-2004 of the surface water drainage pathway to the Willamette River. Analytical results for 16 soil samples collected along the drainage pathway showed that the contaminant distribution of PCP and polycyclic aromatic hydrocarbons (PAHs) along the surface water pathway is limited in extent, was adequately defined, and does not appear to pose significant risk to potential receptors.

8. DEQ prepared a June 20, 2005 *Portland Harbor Source Control Decision*. DEQ concluded that the upland site does not appear to be a significant current or reasonably likely future source of contamination to the Willamette River. Additional groundwater monitoring, described in the October 13, 2004 *Five-year Review Plan* for the LOFTG site, will be conducted to confirm acceptable levels and plume stability. The U.S. Environmental Protection Agency and partners reviewed the Source Control Decision, and the DEQ addressed these comments and modified the Source Control Decision accordingly.
9. A public comment period on DEQ's proposed approval of the cleanup at the subject site was conducted from August 1 to 31, 2005, and no comments were received.

DEQ concludes that based on the information presented to date, remedies implemented at the former LOFTG Site are protective of public health and the environment. The site requires no further action under the Oregon Environmental Cleanup Law, ORS 465.200 et seq., unless new or previously undisclosed information becomes available. This no further action is conditional upon compliance with the Easement and Equitable Servitude and the groundwater monitoring *Five-year Review Plan*. We will update the Environmental Cleanup Site Information System (ECSI) database to reflect this decision.

If you have any questions regarding the site, please contact Tom Gainer at (503) 229-5326.

Sincerely,

James M. Anderson, Manager
Portland Harbor Section

cc: Steve Sander, BPA
Kristine Koch, US EPA
Tom Roick, DEQ NWR
Tom Gainer, DEQ NWR